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**UNITED STATES INTERNATIONAL TRADE COMMISSION
WASHINGTON, D.C.**

In the Matter of

CERTAIN OPTICAL DISK
CONTROLLER CHIPS AND
CHIPSETS AND PRODUCTS
CONTAINING SAME, INCLUDING
DVD PLAYERS AND PC OPTICAL
STORAGE DEVICES

Investigation No. 337-TA-506

**PETITION FOR REVIEW OF COMPLAINANTS ZORAN
CORPORATION AND OAK TECHNOLOGY, INC.**

John Allcock
Mark Fowler
Gerald T. Sekimura
William G. Goldman
Michael G. Schwartz
Thomas A. Burg
DLA PIPER RUDNICK GRAY
CARY US LLP
2000 University Avenue
East Palo Alto, California 94303
Telephone: (650) 833-2000
Facsimile: (650) 833-2001

Smith R. Brittingham IV
Paul C. Goulet
Elizabeth A. Niemeyer
FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, LLP
901 New York Avenue, N.W.
Washington, DC 20001
Telephone: (202) 408-4000
Facsimile: (202) 408-4400

**Counsel for Complainants Zoran Corporation
and Oak Technology, Inc.**

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I. INTRODUCTION

Complainants Zoran Corporation and Oak Technology, Inc. petition for review of portions of the Initial Determination issued by the presiding Administrative Law Judge and served on May 17, 2005. Commission Rule 210.43. Specifically, Zoran and Oak request that the Commission review the ID's conclusions that the Respondents do not infringe two of the three asserted claims of U.S. Patent No. 6,584,527 or any of the asserted claims of U.S. Patent No. 6,546,440. Those findings are based on several unnecessarily narrow and legally erroneous claim constructions resulting in erroneous non-infringement findings. In addition, with respect to one claim element, the ID should have found infringement even under its own adopted claim construction because Respondents essentially conceded that the claimed element was present in the accused devices. Finally, the ID slightly misstated which products were accused of infringement and which of the many Respondents should be found in violation depending on which of the three patents at issue formed the basis for that violation. Those minor corrections to the ID's conclusions will ensure that the findings of infringement are consistent with the evidence presented at the hearing.

Despite those errors, the ID correctly found that the Respondents infringed claim 3 of the '527 patent, that Complainants maintained a domestic industry with respect to claim 3 of the '527 patent, that the '527 patent was valid and enforceable, and ultimately that a number of the Respondents should be found to have violated Section 337. The ID also correctly found that the other two patents at issue in the case, the '440 patent and U.S. Patent No. 6,466,736, were valid and enforceable. Zoran and Oak do not seek review of those decisions in the ID.¹

¹ The ID also found that the Respondents' products do not infringe any of the asserted claims of the '736 patent. Although Zoran and Oak maintain that their positions with respect to the '736 patent were correct, this petition does not seek review of the ID's conclusion of non-infringement on the '736 patent.

II. BACKGROUND

A. The History Of The Investigation.

Complainants Zoran and Oak filed the complaint that led to this Investigation in order to stop Respondents' unauthorized importation and sale of products that use Complainants' patented technology in various optical storage and DVD products. Of particular relevance to this petition, respondent MediaTek, a Taiwanese designer of integrated circuits, sells a number of different controller chips that are incorporated into personal computer optical storage devices, i.e. CD and DVD drives. Many of the other Respondents to this Investigation use those MediaTek chips in their optical storage drives, and many of those drives are imported into the United States.

The Complaint in this case alleged violations of Section 337 based on three patents, two of which are relevant to this petition—the '527 and '440 patents. Those patents are related to each other in that they share the same patent specification and their claims cover similar subject matter. Indeed, they both resulted from continuation applications stemming from an earlier Oak patent, U.S. Patent 5,581,715, which was the subject of an earlier Commission investigation, *Certain CD-ROM Controllers and Products Containing Same II*, Inv. 337-TA-409.²

The '527 and '440 patents relate to communication between mass storage devices, and in particular optical storage devices, and personal or host computers. (Final Initial and Recommended Determination at 71 (hereinafter “Final ID”).) Typically, in an optical disc

² In that investigation, Oak asserted the '715 patent against MediaTek and other companies. The Commission found the '715 patent valid and enforceable in the face of many of the same validity defenses raised in this Investigation, but found non-infringement because the accused products did not perform an error correction step in the precise manner set forth in the patent specification and explicitly set forth in the claim. The claims at issue were means-plus-function claims under 35 U.S.C. § 112, para. 6, so that the scope of certain claim elements was limited by the structures or steps set forth in the specification. As explained later, the '527 and '440 patents do not have any means-plus-function claims.

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storage system, such as a CD or DVD drive in a laptop or desktop computer, an optical disc stores information of interest in the form of data arranged in special formats on the disc. (CX-2, col. 1, ll. 14-20.) A drive controller, which is often a chip on the drive, participates in reading the data from the optical disc and then processing the data to extract the information. (CX-2, col. 1, ll. 55-60.) The drive controller then transfers the extracted information to a personal or host computer. *Id.* Broadly stated, the invention covered by the claims of the '527 and '440 patents is an optical drive controller and a unique host interface that directly connects the drive controller to a host computer via an IDE/ATA data bus to transfer information between the optical drive and the host computer. (*See generally*, CX-2; CX-3.)

The Notice of Investigation listed a number of patent claims at issue in the Investigation, (*see* 69 Fed. Reg. 19876-77 (April 14, 2004)), but following several motions by Complainants to narrow the scope of the Investigation, only claims 1-3 of the '527 patent and claims 1, 5, 7, 8-10, 13-14, 19 and 21 of the '440 patent were asserted at the hearing. (Final ID at 3-4.) The parties presented evidence to the Judge in an eight-day hearing, and filed extensive prehearing and posthearing briefs and proposed findings of fact.

B. The Findings In The Final Initial Determination.

The Final ID found a violation of Section 337 based on infringement of claim 3 of the '527 patent. In so finding, the Final ID rejected Respondents' many invalidity and unenforceability defenses with respect to both the '527 and '440 patents. For purposes of this petition, however, the relevant conclusions in the Final ID are that Respondents' products did not infringe claims 1 and 2 of the '527 patent or any of the asserted claims of the '440 patent. In addition, the Final ID made several minor errors in identifying the accused products and the parties that should be found in violation based on infringement of either the '527 or '440 patents.

1. Claim Construction Errors That Led To Incorrect Non-Infringement Findings.

For purposes of this petition, there are three relevant claim elements that were incorrectly construed in the Final ID: (1) the “data error detection and correction circuitry” element of claims 1 and 2 of the ’527 patent; (2) the “precluded” from accessing element of claims 1 and 14 of the ’440 patent; and (3) the “controller” element common to the claims of both patents. The first two led directly to findings of non-infringement as to those respective claims.

The non-infringement conclusions with respect to claims 1 and 2 of the ’527 patent rested largely on one claim construction issue—whether the claimed “data error detection and correction circuitry” must work the way the error detection and correction circuitry works in the preferred embodiment described in the patent specification. Although claims 1 and 2 themselves do not contain any specific requirements for that circuitry, and they are not means-plus-function claims as in the parent ’715 patent, the Final ID construed that element as limited to the description in the specification. Specifically, relying directly on a portion of the patent specification, the Final ID held that the claimed error detection and correction circuitry “includes a sequential limitation such that error correction is performed before error detection and that the claimed invention utilizes Reed-Solomon error correction codes and a cyclic redundancy checker that performs the division of a CRC generator polynomial into a 16,000-bit EDC code word to produce a CRC remainder.” (Final ID at 99.) The Final ID reached that conclusion notwithstanding the fact that the inventors specifically argued during prosecution that the issued claims of the ’527 patent were broader than those construed by the Commission in the earlier 409 investigation. Ultimately, the Final ID’s construction is nearly identical to the Commission’s earlier construction of the means-plus-function claims in the parent ’715 patent. (*Compare* Final ID at 99 with *Certain CD-ROM Controllers and Products Containing Same II*, Inv. No. 337-TA-409, Commission Opinion at 20 (U.S.I.T.C. Pub. 2351, October 1999), *aff’d* Oak Technology,

Inc. v. U.S. Int'l Trade Comm'n, 248 F.3d 1316 (Fed. Cir. 2001).³ Because the accused devices do not perform the error correction steps in the same order as the circuitry described in the preferred embodiment, the Final ID concluded that they do not infringe claims 1 and 2 of the '527 patent.⁴

The significant claim construction ruling with respect to the '440 patent concerned the requirement of independent claim 1 of "circuitry operable to alter said BSY bit, responsive to command events initiated by the host computer, *to indicate said host computer is precluded from accessing said plurality of ATA command block register addresses,*" and the requirement of independent claim 14 of a "status register including a BSY bit *that indicates when access by said host computer to said ATA command block register addresses is precluded.*" (Final ID at 104, emphasis added.) The Final ID construed both of those claims to require that the host computer is physically prevented from accessing the specified registers, even though the claim itself merely says that the BSY bit "indicates" that the host computer is precluded from accessing the registers, and the experts all agreed that the construction ultimately adopted in the Final ID would exclude the preferred embodiment.

³ Construing the '715 patent, the Commission found that the means-plus-function claim element of a "data error detection and correction means" is limited to a system where "a Reed-Solomon error correction is first performed on an entire sector of CD-ROM assembled data (approximately 16,000 bits), followed by a cyclic redundancy check on the entire CD-ROM sector of assembled data. The cyclic redundancy checker is hardware, commonly available in June 1994, that performs the division of a CRC generator binary polynomial into a 16,000-bit EDC code word to produce a CRC remainder." *CD-ROM Controllers II* Opinion at 20.

⁴ Claim 3 does not require error code correction and detection circuitry, so the fact that the accused devices performed differently than the circuits of the preferred embodiment did not prevent an infringement finding.

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Finally, the Final ID also construed the term “controller” that appears in both the ’527 and ’440 patents to mean “a device or group of devices to control data communications between a host computer and the optical disk drive electronics,” notwithstanding the fact that clear statements in the specification and prosecution history make clear that the claim scope excludes a combination of a controller and a separate translator device.

2. Minor Errors In Findings Regarding The Accused Products Found To Infringe And The Respondents Found In Violation.

The Final ID found that “Respondents’ accused products” infringe claim 3 of the ’527 patent. (Final ID at 187, Conclusion of Law 4.) On a number of occasions, Complainants identified one MediaTek chip, the MT1189, as one of the “accused” products. Respondents and the OUII also appear to have acknowledged that the MT1189 is one of the accused product. And the Final ID identifies the MT1189 as an “accused” product. (Final ID at 173, FF 8.) However, in another portion of the Final ID, the Final ID omitted the MT1189 from the large list of products being accused of infringing the ’527 and ’440 patents. As a result, the conclusion of law in the Final ID that the “accused products” infringe claim 3 of the ’527 patent is somewhat vague and needs clarification so that it is clear that the MT1189 was among the accused products found to infringe claim 3 of the ’527 patent.

In addition, the Final ID erroneously concludes that, having found infringement of claim 3 of the ’527 patent, all Respondents should be found in violation. That conclusion is not supported by the record, because some of the Respondents did not manufacture or import products accused of infringing either the ’527 or the ’440 patents.

III. ARGUMENT

Pursuant to Commission Rule 210.43, a petition for review of an initial determination must specify, with respect to each issue on which review is sought, one of the following:

- That a finding or conclusion of a material fact is clearly erroneous;
- That a legal conclusion is erroneous, without governing precedent rule or law, or constitutes an abuse of discretion; or
- That the determination is one affecting Commission policy.

The claim construction errors described in this petition are erroneous legal conclusions. The minor errors regarding the identification of the accused products and the Respondents that should be found in violation appear to be largely clerical or inadvertent errors, but to the extent they reflect legal conclusions, they are erroneous, and to the extent they reflect factual conclusions, they are clearly erroneous.

A. The Final ID Incorrectly Construed Certain Terms In The '527 And '440 Patents.

While the key feature of the asserted claims of the '527 and '440 patents is the unique host interface permitting a direct connection to the IDE bus, the Final ID relied on two different limitations in these patents—“error detection and correction circuitry” and “precluded”—to find non-infringement of the '440 patent and claims 1 and 2 of the '527 patent. As set forth below, the Final ID’s construction for these terms is incorrect. Accordingly, the Commission should reverse that construction and find that the accused MediaTek chips infringe claims 1 and 2 of the '527 patent and all of the asserted claims of the '440 patent.⁵

1. The '527 Patent.

a. The Final ID Incorrectly Reads Limitations Into The “Data Error Detection And Correction Circuitry” Claim Terms.

Scratches, dust and other imperfections on the optical disc, equipment shortcomings, misalignments, or the like, can cause errors to be introduced into the data being read from the

⁵ As described in more detail below, the proper construction for these terms is dispositive of infringement.

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disc. Typically, data error detection and correction circuitry is provided in an optical disc system in order to find such errors and correct them to the extent practicable. (Hearing Tr., 215:2-5).

The relevant parts of claims 1 and 2 of the '527 patent read as follows:

data error detection and correction circuitry, said detection and correction circuitry including: error correction circuitry for performing error correction on data received from said interface and generating corrected data, and error detection circuitry for detecting errors in data prior to transmission to said host computer... (CX-2, claim 1, col. 28, ll. 39-45); and

data error detection and correction circuitry coupled to said storage medium interface, to provide error free data for transmission to said host computer... (CX-2, claim 2, col. 28, ll. 65-67).

The Final ID focused primarily on the '527 patent specification to assert a construction which reads limitations from the specification into the claims. As stated in the Final ID:

[A] person of ordinary skill in the art as of 1994 would understand the claimed data error detection and correction circuitry includes a *sequential limitation* such that error correction is performed before error detection and that the claimed invention *utilizes Reed-Solomon error correction codes and a cyclic redundancy checker* that performs the division of a CRC generator polynomial into 16,000-bit EDC code word to produce a CRC remainder.

(Final ID at 99 (emphasis added).)

As is apparent from claims 1 and 2, *none* of the sequential limitation, the use of Reed-Solomon error correction codes, or the use of a cyclical redundancy checker expressly appears in those claims. As justification, therefore, for reading these limitations into the claims, the Final ID points to passages in the specification that purportedly limit the scope of the invention:

Significantly, however, the patentees described the “invention” in the specification under the heading Summary of the Invention as comprising “a cyclic redundancy checker for detecting errors . . . after correction . . . by the error code correction circuit.” (CX-2, col. 3, Ins. 24-27 (emphasis added).) The disclosures of the remainder of the '527 patent specification are consistent with this sequential limitation as the '527 specification does not describe any embodiments where error correction does not occur before error detection, which disclosures the Federal Circuit recognized in

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Oak Technology 248 F.3d at 1328. See, Alloc, Inc. v. Int'l Trade Comm'n, 342 F.3d 1361, 1371 (Fed.Cir. 2003) (finding specification indicated that invention was “exclusively directed” to flooring products including “play” despite the fact that said limitation was not expressly stated in claim language); Watts v. XL Systems, Inc., 232 F.3d 877, 883 (Fed.Cir. 2000) (concluding specification limited the invention to embodiments with misaligned taper angles).

(Final ID at 95-96 (emphasis in original).)

The Final ID unsuccessfully attempted to distinguish two controlling cases relied on by Complainants, *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898 (Fed. Cir. 2004) and *Tate Access Floors, Inc. v. Maxcess Tech., Inc.*, 222 F.3d 958 (Fed.Cir. 2000). As the Final ID noted, in both cases “the Federal Circuit concluded that the district court impermissibly narrowed the claims in issue to an embodiment disclosed in the specification in the absence of an express limitation in the claims.” (Final ID at 96-97.) The Final ID’s attempt at distinguishing those cases is misplaced. The *Liebel-Flarsheim* and *Tate Access* decisions make clear that no sound justification exists for the impermissible reading of limitations into the “data error correction and detection circuitry” of claims 1 and 2 of the ’527 patent.

The Federal Circuit confirms in *Liebel-Flarsheim* that it “has *expressly rejected* the contention that if a patent describes only a single embodiment, the claims of the patent *must be construed* as being limited to that embodiment.” *Liebel-Flarsheim*, 358 F.3d at 906 (emphasis added). Thus, the fact that the ’527 patent describes only a single embodiment of circuitry that detects and corrects errors cannot itself be reason to limit the claims to that embodiment. Moreover, *Liebel-Flarsheim* reiterates the conditions required by the Federal Circuit before limitations from a patent specification may be read into the claims, particularly when the specification describes only a single embodiment:

Even when the specification describes only a single embodiment, the claims of the patent will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope

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using “words or expressions of manifest exclusion or restriction.”

Liebel-Flarsheim, 358 F.3d at 906 (citing *Teleflex v. Ficosa N.A. Corp.*, 299 F.3d 1313, 1327 (Fed. Cir. 2002)).⁶ There is simply no such demonstration of any clear intention to limit the claim scope using “words or expressions of manifest exclusion or restriction” in either the ’527 patent specification or its prosecution history.

In *Tate*, while concluding that certain limitations could not be read into the claims from the specification, the Federal Circuit also gave examples of words that might have justified reading in such limitations, had the words appeared in the written description:

It [the written description], however, does not state that the entire “inner body portion” *must be* uniform in appearance, or that the “inner body portion” *cannot consist of* brown kraft paper.

Tate, 222 F.3d at 966 (emphasis added). The words “must be” and “cannot consist of” are clear words or expressions of manifest exclusion or restriction. No such words or expressions appear in the specification or prosecution history of the ’527 patent.

b. The Cases On Which The Final ID Relies Are Inapposite.

In the *Alloc* case cited in the Final ID, the claims involved a floor system, in which a “play” limitation was read into the claims from the specification based on express statements made in the specification as well as in the prosecution history. *Alloc*, 342 F.3d at 1368-1369. In the specification, for example, not only was it found that “play” was “necessarily present” in order to permit claimed flooring system features relating to “displacement” and “disassembly,” but the specification further criticized prior art floor systems without “play.” *Id.*, at 1368-1370.

The prosecution history further confirmed that “play” was a key feature of the claimed

⁶ See also *Alloc*, 342 F.3d at 1368 (citing *Middleton, Inc. v. Minn. Mining & Mfg. Co.*, 311 F.3d 1384, 1388 (Fed. Cir. 2002) for its explanation “that in order to disavow claim scope, a patent applicant must clearly and unambiguously express surrender of subject matter during prosecution”).

invention. In particular, in the prosecution of the parent '621 application, prior art was distinguished based upon a representation that “play” was important because it enabled displacement and disassembly of connected panels, thereby expressly disavowing systems without “play,” and in the independent claims of the offspring patents there was incorporated “the same limitations adopted by the applicant to secure allowance of the parent '621 patent.” *Id.*, at 1371-1372. Thus, *Alloc* stands for the unremarkable proposition that there must be an express statement of limitation in the specification and disavowal in the prosecution history *before* limitations can be read from the specification into the claims. As discussed below, the '527 patent specification and file history lack such express statements and disavowals.

Importantly, and unlike the cases relied upon by the Final ID, *Liebel-Flarsheim* teaches what constitutes an explicit disclaimer, for example, in its discussion of *SciMed Life Systems, Inc. v. Advanced Cardiovascular Systems, Inc.*, 242 F.3d 1337 (Fed. Cir. 2001). In *SciMed*, the Federal Circuit justified reading a “coaxial lumen” limitation into the claims and thus excluded a side-by-side embodiment from the scope of the claims, “based on an *explicit disclaimer* of the side-by-side structure, *not the mere absence* of any reference to that structure in the specification.” *Liebel-Flarsheim*, 358 F.3d at 906 (emphasis added). Thus, in *SciMed*, the specification discussed *only* the coaxial lumen structure, it characterized the side-by-side structure as inferior, *and* it concluded that the coaxial lumen structure was used in “*all embodiments of the present invention contemplated and disclosed herein.*” *Id.* (emphasis added).

Liebel-Flarsheim also explained the reasons behind the Federal Circuit’s decision to read limitations from the specification into the claims in the other case cited by the Final ID, *Watts v. XL Systems, Inc.*, 232 F.3d 877 (Fed.Cir. 2000). The Court stated:

[I]n *Watts*, the court held that the applicants specifically “limit[ed] the invention” to particular structures by specifying [in the

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specification] that *the invention uses* those structures, *and* further limited the scope of the invention by *distinguishing close prior art* in the prosecution history.

Liebel-Flarsheim, 358 F.3d at 907 (citing *Watts*, 232 F.3d at 883 (emphasis added)). In particular, the *Watts* court stated:

The specification only describes one method in which “tapered external threads [are] dimensioned” to achieve the sealing connection, as required in claim 18 of the ‘717 patent. That method is to misalign the taper angles of the internal and external threads. *See* ‘717 patent, col. 3, ll. 3-14. Moreover, the specification actually limits the invention to structures that utilize misaligned taper angles, *stating that “the present invention utilizes [the varying taper angle] feature.”* ‘717 patent, col. 3, ll. 12-14.

Watts, 232 F.3d at 883 (emphasis added).

The clear importance attributed by the inventor of the feature to the invention can be appreciated from the plainly boastful words chosen for the paragraph in which the quoted passage is found:

As taught by my series of patents beginning with U.S. Pat. No. 2,766,829 which have enjoyed worldwide commercial success for over 30 years in the oilfield, th[e] space industry and the nuclear industry, the taper of the external thread is formed at a lesser angle than the taper of the internal thread so as to ensure a maximum primary sealing tendency at the smallest possible pressure area so as to minimize the axial load imposed on the connection due to internal fluid pressure. The present invention utilizes this feature in combination with other features.

(U.S. Pat. No. 4,813,717, col. 3, lines 4-14.)

As to the prosecution history, the *Watts* court stated:

The invention is similarly limited in the prosecution history, in which Watts distinguished the primary reference based on the invention’s misaligned taper angles. Watts stated that in the primary reference “‘no thread interference’ is claimed which teaches away from the present invention.” It is clear that the phrase “no thread interference” refers to the interference caused by the misaligned taper angles. Thus, Watts cannot now maintain that his invention does not require misaligned taper angles.

Watts, 232 F.3d at 883.

Here, there are no such express limitations in the claims of the '527 patent or in the specification and file history to require limiting the scope of the claims by imparting limitations from the specification. The cases relied upon in the Final ID are inapposite and fail to support its incorrect construction.

c. The Final ID's Attempts To Distinguish *Liebel-Flarsheim* And *Tate Access* Are Misplaced.

Although acknowledging that *Liebel-Flarsheim* is an example of impermissible narrowing of the claims in issue to an embodiment disclosed in the specification in the absence of an express limitation in the claims, the Final ID attempts to distinguish *Liebel-Flarsheim* from the present case by noting:

[T]he Federal Circuit based its decision in part on the fact that the applicant added broader claims during prosecution, thereby replacing claims that previously included the disputed limitation, and commented that the addition of such broader claims represented “*a strong indication that the applicants intended* those claims to reach [devices not containing the limitation in issue].”

(Final ID at 96, emphasis added.)

However, the Federal Circuit’s “intention of the applicant” rule is highly relevant to these facts. What could be more explicit an indication of the applicants’ intent that limitations not be read from the specification into the claims than the statements made by applicants’ patent attorney on *four different occasions* during prosecution of the '527 patent that the “error detection and correction circuitry” was not limited to a particular structure or sequence of operations?⁷ (CX-10, at ZC001505, ZC001621, ZC001741-43, and ZC001983.)

⁷ Some of the limitations that the Final ID impermissibly reads into the claims were expressly *removed* from the claims during prosecution. (*Compare* CX-10, at ZC001200 with CX-10, at ZC001502.)

**d. The Statements By The Prosecution Attorney Traversing
The Examiner's Incorrect Interpretation Of Claim Scope
Are Controlling.**

The Patent Office is required to give claims their broadest reasonable interpretation.

Rexnord v. Laitram Corp., 274 F.3d 1336, 1347 (Fed. Cir. 2001). That is, an Examiner is not permitted to read limitations from the specification into claims that are otherwise unambiguous.

In re Bigio, 381 F.3d 1320, 1325 (Fed. Cir. 2004) When the claims of the '527 patent application were then-pending, claim 25 (issued claim 1) stated, in relevant part:

data error detection and correction circuitry, said detection and correction circuitry including error correction circuitry for performing error correction on said data received from said interface and generating corrected data therefrom, and a cyclic redundancy checker for detecting errors in said data or in said corrected data...

(CX-10, at ZC001200.)

In response to a prior art rejection the patent attorney amended then pending claim 25 as follows:

data error detection and correction circuitry, said detection and correction circuitry including; error correction circuitry for performing error correction on [said] data received from said interface and generating corrected data [therefrom], and error detection circuitry a cyclic redundancy checker for detecting errors in [said] data [or in said corrected data] prior to transmission to said host computer...

CX-10, at ZC001502 (strikethrough emphasis added). The patent attorney identified these amendments and noted that the scope of the claim was broadened accordingly. (CX-10, at ZC001505.)

Specifically, the patent attorney submitted the following comments regarding the error detection and correction circuitry:

Applicant has also amended claim 25 to further clarify that with regard to the timing of error detection operations, it is ***only required*** that data errors be detected before the data is transferred

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to the host computer. Moreover, *any kind* of error detection circuitry may be employed, regardless of whether or not it uses a cyclical redundancy code or error detection codes other than a cyclical redundancy check code.

(CX-10, at ZC 001505 (emphasis added).)

Nevertheless, the Examiner took a restrictive view of the claim scope in his Notice of Allowance. (Final ID at 92-93; *see also* CX-10, at ZC001510-001513.) The prosecuting attorney, considering the Examiner's statements to be incorrect, filed a continued prosecution request to address the Examiner's statements as well as to continue prosecuting the pending claims. (CX-10, at ZC001515-01521.) Specifically, the attorney noted the following in his "Comments on Statement of Reasons for Allowance":

Dear Examiner:

The "Statement of Reasons for Allowance" relies upon a decision of the ITC (In the Matter of CERTAIN CD-ROM CONTROLLERS AND PRODUCTS CONTAINING THE SAME II, Inv. No. 337-TA-409, U.S. International Trade Commission) that Applicant is currently appealing (Appeal No. 00-1078; Oak Technology, Incorporated, Appellant v. International Trade Commission, Appellee and MediaTek, Inc., United Microelectronics Corp., Lite-On Technology Corp. and AOpen, Inc., Intervenors.) *For the same reasons asserted by Applicant in this appeal, the Applicant respectfully disagrees with the "Statement of Reasons for Allowance."*

(CX-10, at ZC 001621 (emphasis added).)

In the next response by the patent attorney, the Examiner's previous statements were specifically addressed:

The "Statement for Reasons of Allowance" dated December 4, 2000 relied on In the Matter of CERTAIN CD-ROM CONTROLLERS AND PRODUCTS CONTAINING THE SAME II, U.S. International Trade Commission, Inc. [sic] No. 337-TZ-409 [sic], page 20 lines 18-22, Publication 2351, October 1999. This decision was appealed to the Federal Circuit and the attached IDS includes the Federal Circuit's decision. See Oak Technology, Inc. v. International Trade Commission, 248 F.3d 1316; 2001 U.S. App. LEXIS 7985 (Fed. Cir. 2001.) Although the Federal Circuit

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affirmed the finding of non-infringement, the Federal Circuit clarified the appropriate manner of construing the claims of U.S. Patent 5,581,715. In particular, the Federal Circuit relied on particular language in the claims ("the plain language of the claim") in performing its claim construction that resulted in the determination of non-infringement. *The claim language relied upon by the Federal Circuit is not present in the now pending claims and there is no basis for restricting these claims in the same manner.*

Thus, Applicant respectfully submits that the "Statement of Reasons for Allowance" dated December 4, 2000 is not applicable to the now pending claims. For instance, Applicant traverses paragraph 3 of the "Statement of Reasons for Allowance" because it inappropriately takes Official notice that "the claimed invention requires that the data errors must be detected and corrected before the data is transferred to the host computer and that the error correction must occur before the data error detection." Applicant traverses this official notice because *this limitation was not and is not found in claim 25* (it is also not found in the newly added claims.) In addition, Applicant traverses the "Official Position" taken in paragraph 3 of the "Statement of Reasons for Allowance" because it *reads limitations of the specification into claim 25*. Similarly, Applicant traverses paragraph 4 of the "Statement of Reasons for Allowance" because *it also reads limitations of the specification into claim 25*. In this regard, *the Federal Circuit decision clearly based its decision on the language in the claims of U.S. Patent 5,581,715, which language clearly is not present in the now pending claims of this application.* As such, Applicant respectfully requests withdrawal of the "Statement of Reasons for Allowance" and reconsideration of the now pending claims.

(CX-10, at ZC 001741-ZC 001743 (emphasis added).)

In a July 8, 2002, Office Action, the Examiner rejected the then-pending claims in light of the Yellow Book. (CX-10, at ZC001823-001829.) The patent attorney once more addressed the Examiner's statements, noting that "[w]ith regard to claims 25 and 35 [issued claims 1 and 2 of the '527 patent], *there is no limitation that 'the error correction process is performed before the error detection process'*" and that it was inappropriate for the Examiner to limit the "data error detection and correction circuitry" element to the temporal sequence of operations described in the Yellow Book. (CX-10, at ZC001938 (emphasis added).)

These express statements by the prosecution attorney in the '527 patent prosecution history inform the intended scope of the claim, and the Examiner's restrictive view was legally incorrect. *See Liebel-Flarsheim*, 358 F.3d at 909 (strong indication of intent in prosecution history). The Patent Office must give claims their broadest reasonable interpretation. *Rexnord*, 274 F.3d at 1347. Not only is the prosecution of the '527 patent analogous to the prosecution of the patent involved in *Liebel-Flarsheim*, it was *unlike* the prosecution of the patents involved in *Alloc* and in *Watts* in that the "data error detection and correction circuitry" element of the '527 patent *was never the basis for distinguishing or criticizing prior art*.

e. The Final ID's Reliance On The "Summary Of The Invention" Is Incorrect.

Contrary to the conclusion reached in the Final ID, it cannot be said that the "Summary of the Invention" in the '527 patent describes the invention as comprising a cyclic redundancy checker for detecting errors ... after correction ... by the error code correction circuit, much less demonstrates a clear intention to limit the claim scope using words of manifest exclusion or restriction. (*See* Final ID at 95.) Indeed, a review of the "Summary of the Invention" of the '527 patent is telling. First, the only time the word "invention" is used in the "Summary of the Invention" is in a sentence indicating that the invention "relates to" a compact disk drive controller. Unlike the case in *Watts*, there simply is no statement as to what "the invention" uses, much less what type of error detection and correction circuitry it uses. (*See e.g.*, CX-2, col. 2, ll. 61-68.)

Second, the Final ID concludes (incorrectly) that the '527 patent specification teaches that "the invention" performs error correction prior to error detection using a cyclic redundancy checker. (Final ID at 97.) However, the portion of the specification on which the Final ID relies (CX-2, col. 3, ll. 24-27) does not state that "the invention" uses this temporal sequence and structure for error correction and detection circuitry. Rather, the cited passage is describing a

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digital signal processor interface aspect of the optical drive controller. (CX-2, col. 3, ll. 24-27.)

Moreover, in the detailed description of the invention, the '527 patent specification notes that the error detection and correction circuitry that is described is merely one implementation of that aspect of the optical drive controller.⁸ (CX-2, col. 6, ll. 15-50 ("FIG. 2 is a block diagram of *an implementation* of the drive controller 10 of the present 30 invention") (emphasis added).)

Therefore, unlike *Watts* and *Alloc*, the '527 patent specification has no express statements limiting or disavowing structures or operations for the "data error detection and correction circuitry," nor was prior art distinguished or criticized in the context of such a claim element during prosecution. Like *Tate* and *Liebel-Flarsheim*, the '527 patent specification does not use words like "must be" or "cannot consist of," or any other words of explicit disclaimer, in connection with the "data error detection and correction circuitry."⁹ And like *Liebel-Flarsheim*, the '527 patent prosecution history contains strong indications of an intent that the term not be limited to a particular sequence of operations or structure. Thus, as to the "data error detection and correction circuitry" claim limitations of claims 1 and 2 of the '527 patent, there is nothing in either the '527 patent specification or the prosecution history that demonstrates a clear intention to limit the claim scope using any words, much less words of manifest exclusion or restriction. In fact, in the prosecution history there are numerous expressions of intent that there be no limitation to a particular structure or sequence of operations.

⁸ See also CX-2, col. 3, ll. 49-50 ("FIG. 2 is a block diagram of *an implementation* of the present invention.") (emphasis added).)

⁹ In fact, the '527 patent specification's "Summary of the Invention" section implies that there are other error correction circuitry embodiments that do not employ Reed Solomon codes. (CX-2, col. 3, ll. 20-24 ("That error correction circuitry *could* employ Reed-Solomon codes.")) (emphasis added)).

f. The Final ID's Reliance On The Examiner's "Official Notice" Is Misplaced.

Finally, the Final ID supports its finding that the claimed error detection circuitry uses a "cyclic redundancy checker" and requires a temporal sequence of operation by relying upon an unsolicited comment by the Examiner in his December 4, 2000, Notice of Allowance, in which the Examiner, taking "official notice," purported to restrict the scope of the claims based upon his view that the specification describes only one embodiment. (*See*, CX-10 at ZC 001512; Final ID at 98-99.)

However, the Examiner's statement cannot limit the scope of the claim. Examiners are obligated to confer the broadest reasonable interpretation to claims during prosecution. *Rexnord*, 274 F.3d at 1347; *Burlington Industries Inc. v. Quigg*, 822 F.3d 1581, 1583 (Fed., Cir. 1987) (issues of judicial claim construction such as arise after patent issuance, for example during infringement litigation, have no place in prosecution of pending claims before the PTO, when any ambiguity or excessive breadth may be corrected by merely changing the claim.). Had the Examiner wanted to condition patentability upon "error detection and correction circuitry" requiring either a temporal sequence or a specific structure, the Examiner could have required a specific amendment to the claims. *See, e.g., Rexnord*, 274 F.3d at 1347. The Examiner did not and, instead, purported to impart a restrictive scope to the claims in an "official notice" in his Notice of Allowance. (CX-10 at ZC 001515-1521.) However, such statements do not define the scope of the claims, particularly when the applicant states its disagreement with the Examiner during prosecution, as applicants did here. *Dow Chem. Co. v. Sumitomo Chem. Co., Ltd.*, 257 F.3d 1364, 1382 (Fed. Cir. 2001). (CX-10 at ZC001510-1513; ZC001515-1521; ZC001621-1622; ZC001741-1743; ZC001823-29; ZC001938.)

Further, the Federal Circuit has counseled "the PTO to avoid the temptation to limit broad claim terms solely on the basis of specification passages" and cautioned that "[a]bsent

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claim language carrying a narrow meaning, the PTO should only limit the claim based on the specification or prosecution history *when those sources expressly disclaim* the broader definition. *See, e.g., Liebel-Flarsheim Co. v. Medrad, Inc.*, 385 F.3d 898, 906-06 (Fed. Cir. 2004).” *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004) (emphasis added) (PTO Board was correct to decline importing limitation from the specification that would limit “hair brush” in claim to hair brushes for the scalp based upon “Objects of the Invention” discussion of anatomically correct hairbrush for brushing scalp hair). Thus, the Examiner’s attempt to take “official notice” that the “error detection and correction circuitry” was restricted to the only embodiment disclosed in the ’527 patent specification was itself defective and flawed from the start.

First, the Examiner failed to identify any express disclaimer in the specification.¹⁰ Second, as to the Examiner’s identified basis, the Federal Circuit has expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment. *Liebel-Flarsheim*, 358 F.3d at 906. Third, and most telling, the Remarks of applicants’ attorney which triggered the Examiner’s attempted “official notice” was itself a clear indication in the prosecution history that no such restriction was intended, and thereby affirmed that no express disclaimer had been made or intended.¹¹

Moreover, the numerous statements by applicants’ patent attorney made thereafter during the prosecution, as set forth in detail in Section III.A.1.d., above, leaves no doubt that a broad

¹⁰ Further, just as the “Objects of the Invention” discussion of an anatomically correct hair brush for brushing scalp hair was not an express disclaimer in *Bigio*, a description in the “Summary of the Invention” that “the digital signal processor interface of the CDDC further comprises a cyclic redundancy checker for detecting errors” is not an express disclaimer, nor a clear disavowal, in the ’527 patent. (CX-2, col. 3, lines 24-25.) *See Liebel-Flarsheim*, 358 F.3d at 906-09.

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construction was intended, and that there was no express disclaimer and no disavowal. As the applicants' patent attorney told the Examiner, it is significant that the relevant claim language in the parent '715 patent is materially different than the claim language of the '527 patent. In particular, claim 1 of the '715 patent includes the following language that is absent from the claims of the '527 patent: "a *cyclic redundancy checker* for detecting errors in said assembled data *after* correction of said data by said correction circuitry for providing corrected data." (Hearing Tr., at 253:10-256:17; 735:19-736:15; CX-2, col. 28, ll. 39-45, 65-67; CX-1789, col. 29, lines 10-16.) (emphasis added).

The Federal Circuit, in ruling upon an appeal by Oak of the Commission's Final Determination in the 409 Investigation, affirmed the Commission's construction of the error detection and correction circuitry of claim 1 of the '715 patent. That construction required the same limitations that the Initial Determination now seeks to impose on the error detection and correction circuitry in the '527 patent. *See Oak Technology*, 248 F.3d at 1328-30. In reaching its decision, the Federal Circuit expressly relied upon the above-quoted "plain language of the claim" and noted that there was "no discussion anywhere in the intrinsic record" that would support Oak's proposed construction. *Id.* Here, by contrast, there is no such narrowing language in the claim, and the prosecution history makes clear that applicants did not intend to limit the scope of their claims to the construction of the '715 patent.

Because there are no statements *by the applicants* in the prosecution history (or in the specification) that constitute a clear disavowal or express disclaimer of the broad scope of the claim language and, indeed, the amendments and statements made by applicants in the

¹¹ "[A]ny kind of error detection circuitry may be employed, regardless of whether or not it uses cyclical redundancy code or error detection codes other than cyclical redundancy code." (CX-10 at ZC 001512.)

prosecution history directly contradict the limitations found by the Final ID, those limitations must be rejected. *Teleflex*, 299 F.3d at 1327.

Accordingly, the Commission should review and reverse the Final ID's incorrect claim construction of claims 1 and 2 of the '527 patent.

2. The '440 Patent

a. The Final ID Did Not Properly Construe The Phrases In Claims 1 And 14 Concerning The Role Of The BSY Bit In The Claimed Device.

Independent claims 1 and 14 of the '440 patent share a common claim limitation concerning the role of the BSY bit in the claimed device. MediaTek acknowledged that the remaining claim limitations of claims 1 and 14 are met in the accused devices, and, thus, the proper construction of this term is also dispositive of infringement. (Hearing Tr., 2748:16-2751-16; 2759:11-2760:13.)

The principle dispute between the parties concerning the '440 patent is the proper construction of two key phrases in claims 1 and 14 of the '440 patent:

circuitry operable to alter said BSY bit [in the status register]... to indicate said host computer is precluded from accessing said plurality of ATA command block register addresses (claim 1, CX-3, col. 28:53-57); and

said status register including a BSY bit that indicates when access by said host computer to said ATA command block register addresses is precluded (claim 14, CX-3, col. 29:66 - col. 30:2.)

During the hearing, Complainants argued that the proper construction for these limitations as a whole is consistent with the teachings of the ATA specification, which the private parties' experts agreed was central to understanding the claimed invention.¹² (See CBr. at 22.) Respondents and the OUII, on the other hand, argued that the term "precluded" in the

disputed limitation was dispositive of the construction of the limitation as a whole, and should be construed in accordance with its plain dictionary meaning, without consideration of the surrounding claim language. (*See* SBr. at 29; RBr. at 44-45.) The Final ID adopted the construction advocated by Respondents and the OUII and incorrectly construed this claim limitation to require that the host computer be “prevented from accessing the ATA command block registers.” (Final ID at 107.) In reaching this construction, the Final ID relied exclusively (and impermissibly) on the plain meaning of one term (“precluded”) in the disputed phrase, and ignored the full context of the language in which the term appears. (Final ID at 106-107.) As a result of this incorrect construction, the Final ID found that the accused MediaTek controllers did not infringe the ’440 patent. (Final ID at 128.)

Complainants request that the Commission review the construction of this disputed limitation because it: (1) relies exclusively (and improperly) on the dictionary definition for the term “precluded” in the claims, without considering the full context of the claim limitation at issue; (2) is contrary to the well understood role of the BSY bit in arbitrating access to the ATA command block registers *as acknowledged by both parties’ experts*; and (3) expressly excludes the preferred embodiment, which is rarely, if ever, correct. For these reasons, Complainants request that the Commission review and reverse the Final ID’s construction of this claim limitation and find that each of the accused MediaTek optical storage controller chips, and the other Respondents’ products containing those chips, infringe the asserted claims of the ’440 patent.

¹² The ATA Specification is an ANSI standards body document that describes the operating characteristics of the IDE/ATA bus. (*See* CX-1294; CX-3, col. 2, ll. 24-28.)

b. The Final ID Improperly Limited Its Construction To The Dictionary Definition For The Term “Precluded” And Ignored The Full Context Of The Claim Limitations At Issue.

The Federal Circuit has consistently cautioned against relying on the use of abstract dictionary definitions in a vacuum to construe disputed limitations. For example, in *Ferguson Beauregard/Logic Controls, Division of Dover Resources, Inc. v. Mega Systems, LLC*, 350 F.3d 1327 (Fed. Cir. 2003), the Federal Circuit noted the problems with relying exclusively on dictionary definitions to determine the scope of a claim term.

Words often have different meanings to different people and in different contexts, accounting for the multiple ordinary meanings found in dictionaries. Dictionary definitions, while reflective of the ordinary meanings of words, do not always associate those meanings with context or reflect the customary usage of words by those skilled in a particular art. *The words used in the claims must be considered in context* and are examined through the viewing glass of a person skilled in the art. It is the use of the words in the context of the written description and customarily by those skilled in the relevant art that accurately reflects both the “ordinary” and the “customary” meaning of the terms in the claims of a patent.

Ferguson, 350 F.3d at 1338 (internal citations omitted) (emphasis added).

Similarly, in *Brookhill-Wilk I, LLC v. Intuitive Surgical, Inc.*, 334 F.3d 1294 (Fed. Cir. 2003), the Court held that “[w]hile certain terms may be at the center of the claim construction debate, the context of the surrounding words of the claim also must be considered in determining the ordinary and customary meaning of those terms.” *Brookhill-Wilk*, 334 F.3d at 1300. The Court noted that “[w]hile dictionaries and treatises are useful resources in determining the ordinary and customary meaning or meanings of disputed claim terms, the correct meaning of a word or phrase is informed only by considering the surrounding text.” *Id.* (emphasis added). Importantly, the Court also noted that “[o]ur precedent referencing the use of dictionaries should not be read to suggest that abstract dictionary definitions are alone

determinative. In construing claim terms, the general meanings gleaned from reference sources, such as dictionaries, *must always be compared against the use of the terms in context.*" *Id.* (emphasis added).

The Final ID improperly focused on a single word in each disputed phrase—"precluded"—to ascertain the scope of the limitations. In so doing, the Final ID improperly ignored the context of that term within the remaining language of these phrases, and reached a construction that is at odds with the understanding of those skilled in the art *as acknowledged by both parties' experts.*

When properly considered in the correct context, the appropriate claim construction inquiry is not the abstract meaning of the term "precluded," but rather how one skilled in the art would understand the full context of the disputed limitation, namely, the role of the BSY bit in the status register in arbitrating access to the ATA command block registers. Indeed, Complainants' expert testified that his construction was consistent with the understanding of one skilled in the art when considering the full context of the disputed claim language:

BY MR. GOLDMAN: Can you briefly summarize again for the record what your interpretation for that phraseology is in the claims.

MR. SAMUELS: Well, *I believe that that phrase has to be interpreted in the light of its usage in the entire claim element,* where it's clear that the BSY bit indicates that the host is precluded from accessing. And when you look at that term in -- or that phrase in -- interpret that in the world of the ATA transfer protocol specification, that means that the BSY bit is an indication to the software that, when that bit is on, the task file registers are owned, if you like, by the peripheral, and that the host is disallowed or -- from accessing them. And the ATA specification is clear what the consequences are of attempting to read those registers. It's really -- it doesn't say anything specific about what it means if the host attempts to write them. But in my opinion, someone of ordinary skill would understand that the purpose of the BSY bit is to tell the host, as controlled by the software program, that when the BSY bit

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is set, it should not attempt to write those registers. (Hearing Tr., 420:1-23 (emphasis added)).¹³

Respondents' expert *agreed* with Mr. Samuels that one skilled in the art would normally understand the claim to be referring to the ATA specification's description of the status register and the BSY bit and, yet, Mr. Buscaino ignored this fundamental understanding of the entire limitation and incorrectly based his construction on the abstract meaning of the lone term "precluded":

BY JUDGE LUCKERN: I'm going to have Mr. Levangie hand you page 294 of the public transcript of February 7th, 2005. He will hand it to you right now. I'm going to ask you to read to yourself the testimony of Mr. Samuels from lines 4 to 18 in response to the question at lines 1 to 3. And I'm going to ask you if you agree with the testimony of Mr. Samuels with respect to this BSY bit role in the communication between the host computer and peripheral as it's described in the ATA specification.¹⁴

MR. BUSCAINO: I'm sorry, which lines?

Q: Read to yourself lines 1 through 19.

A: Okay. Okay. I've read this.

¹³ See also, Hearing Tr., 290:7-24.

¹⁴ The relevant testimony from Mr. Samuels is as follows:

BY MR. GOLDMAN: And what is the role of the BSY bit in the communication between the host computer and the peripheral as it's described in the ATA specification?

MR. SAMUELS: The ATA specification describes the BSY bit as essentially indicating the ownership of the task file registers. By ownership, I mean whether the host or the attached hard disk drive are allowed to access and modify those registers. When the BSY bit is a zero, it indicates that the drive is not busy, and that the host is allowed to alter those registers. When the BSY bit is a one, it indicates that the drive is busy and using the task file registers, and that the host should not write them at that point in time. The spec says that it cannot write them. And if it attempts to read them, it should get back only the status register which contains the BSY bit. (Hearing Tr., 294:1-18).

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Q: And you agree with that testimony?

A: I agree with the testimony. I don't know if it addresses -- exactly addresses the exact issue that's spelled out in the claims. But I agree with this testimony.

Q: And when you say that I don't know if it addresses exactly -- exactly addresses the exact issue that's spelled out in the claims, what do you mean by that testimony?

A: What I mean by that is that when the BSY bit is set, there's circuitry that precludes access to the registers, from accessing the registers. And what's stated here is, what he says is: When the BSY bit is a 1, it indicates that the drive is busy and using the task file registers and that the host should not write them at that point in time. The spec says that it cannot write them. Okay. And the spec is right that -- because the spec teaches you to provide the -- the alternate status register on a read. And the spec says you should not do it.

BY MR. OTTESON: Can I just interject. What spec are you talking about?

THE WITNESS: I'm sorry. The ATA specification.

BY JUDGE LUCKERN: That's where I assumed you were. Go ahead.

THE WITNESS: Right. So I think the difference here is whether it should not write them or cannot write them is the issue.

Q: And why is that such a big difference?

A: Well, it's one thing to say you should not do it. And it's another thing to say that you cannot do it. It's like, you know, when I was a kid and had a cookie jar on the counter and my mom said I couldn't take a cookie out of the cookie jar, that doesn't mean I couldn't still do it. But if she put the cookie jar up really high, I just couldn't do it. I just couldn't do it. There's a difference between shall not do it and cannot do it.

Q: And how is that significant or important with respect to the interpretation of the claims here or this whole subject matter that I've got to decide?

A: I think it's important because the claim states that the BSY bit's an indicator that prevents the host computer from accessing command block registers. And that's what it says in the claim. And I think, you know, that's what one of skill in the art would

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understand that claim element to mean.

Q: And that would mean it cannot or should not?

A: It cannot. (Hearing Tr., 2668:22-2671:18).

What's more, Mr. Buscaino's position regarding the proper meaning of this claim term was inconsistent. Notwithstanding his initial testimony that the disputed term should be restricted to the dictionary meaning of "preclude," when demonstrating that a commercial embodiment of the invention met the claim language, Mr. Buscaino *adopted Mr. Samuels' construction for this term and relied upon the ATA specification:*

BY MR. OTTESON: Now, in your expert experience, would it be possible to design an optical controller chip with host interface circuitry that would preclude the host computer from accessing the ATA command block registers when BSY is set?

MR. BUSCAINO: Yes, it would. In fact I think it's demonstrated in schematics of the OTI-11 that accessing the command block registers when BSY is set would preclude access to the command block registers.

Q So this slide [RDX-408C] that you prepared, what is it showing?

A This slide I presented here is a schematic from the OTI-11, dated April 30th of 1993. It demonstrates that when the host computer attempts to read one of the command block registers when the BSY bit is set, that that access will be prevented. *In fact it's prevented by routing the access to reading of the status register, as called for in the ATA specification.* So this circuitry shows where the host address lines come into the circuitry and come through decoding logic, down here in these boxes on the bottom left here, which would select the address if BSY was not set, or remap the address if BSY was set. And that would continue on through the circuit. (Hearing Tr., 2651:20-2653:10).

Despite Mr. Buscaino's demonstrably inconsistent positions regarding his interpretation of the disputed claim limitation, the Final ID adopted Mr. Buscaino's "preventing access" construction, and in so doing ignored the full context of the disputed limitation. Had the Final

ID applied the correct legal standard by considering the full context of the disputed phrases, and not focused solely on the abstract meaning of a single term, it would have reached the construction advanced by Complainants' expert. (*See* CBr. at 21-22.) Indeed, as set forth below, Complainants' construction is fully supported by the express language of the claims as understood by those skilled in the art, is consistent with the usage of the BSY bit and the status register in the '440 patent specification (and the ATA specification), and is fully consistent with the understanding of those skilled in the art concerning the role of the BSY bit in managing access to the ATA command block registers. (*See* CBr. at 22.) The construction adopted by the Final ID is at odds with that understanding and should be reviewed and reversed.

c. The Final ID's Construction Is Contrary To The Understanding Of Those Skilled In The Art.

Claim terms are to be construed consistent with the understanding of one skilled in the art. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 986 (Fed. Cir. 1995) (en banc), *aff'd* 517 U.S. 370 (1996). This is a fundamental tenet of claim construction that must be followed in each case. *Id.* Here, however, the Final ID's construction of "precluded" from access runs afoul of the rule.

The express language of the disputed claim term refers to the BSY bit in the status register and its role in arbitrating access to the command block registers. (*See* CX-3, claims 1 and 14.) Both parties' experts agree that the ATA specification reflects the understanding of those skilled in the art *at the time of the invention* concerning the requirements for communication over the IDE bus, including the operation of the BSY bit in the status register.¹⁵

¹⁵ Indeed, one of the first things that Phil Verinsky, one of the inventors on the '440 patent, did when setting out to design a host interface that could communicate over the IDE/ATA bus was to study the ATA specification. (Hearing Tr., 43:2-45:11; 317:14-318:1.) Specifically, with regard to his invention, Mr. Verinsky testified that he "wanted to follow the ATA specification as closely as possible." (Hearing Tr., 43:6-8.) The other inventor, Mike Case, also studied the

(footnote continued)

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(Hearing Tr., 419:21-420:23; 2624:6-2625:4.) Indeed, the ATA specification is referenced numerous times in the '440 patent specification.¹⁶

With regard to the BSY bit and the status register, the ATA specification discloses the following:

Status Register. This register contains the drive status... BSY (Busy) is set whenever the drive has access to the Command Block Registers. The host [computer] should not access the Command Block Register when BSY = 1. When BSY=1, a read of any Command Block Register shall return the contents of the Status Register. (CX-1294 at 1039DOC00015 (emphasis added)).

Complainants' expert, Mr. Samuels, testified that with regard to the BSY bit and the status register, the well understood purpose is to arbitrate access to the command block registers.

BY MR. GOLDMAN: Okay. And we were specifically talking about your interpretation for the term preclude from accessing that is present in claims 1 and 14 of the '440 patent. Do you remember that?

MR. SAMUELS: Yes.

Q: Can you briefly summarize again for the record what your interpretation for that phraseology is in the claims.

A: Well, I believe that that phrase has to be interpreted in the light of its usage in the entire claim element, where it's clear that the BSY bit indicates that the host is precluded from accessing. *And when you look at that term in -- or that phrase in -- interpret that in the world of the ATA transfer protocol specification, that means that the BSY bit is an indication to the software that, when*

ATA specification in connection with his work on designing the host interface. (Hearing Tr., 154:7-155:12; 416:20-22.) Specifically, Mr. Case testified that his goal was to implement "basically whatever was needed in that [ATA] specification so that a CD-ROM controller would be able to talk successfully on an IDE bus to [the] host computer." (Hearing Tr., 155:5-12.)

¹⁶ In addition to numerous other references to the ATA specification, the '440 patent states "[a]n alternative bus structure is available within standard personal computer architecture available for use with a CD drive controller. This structure is referred to as integrated drive electronics with an AT attachment interface, or IDE/ATA. *The American National Standards Institute has published this standard and it is currently widely available.*" (CX-3, col. 2, ll. 24-28 (emphasis added)).

that bit is on, the task file registers are owned, if you like, by the peripheral, and that the host is disallowed or -- from accessing them. And the ATA specification is clear what the consequences are of attempting to read those registers. It's really -- it doesn't say anything specific about what it means if the host attempts to write them. But in my opinion, someone of ordinary skill would understand that the purpose of the BSY bit is to tell the host, as controlled by the software program, that when the BSY bit is set, it should not attempt to write those registers. (Hearing Tr., 419:21-420:23 (emphasis added)).¹⁷

Respondents' expert, Mr. Buscaino, agreed. (Hearing Tr., 2627:21-25.) Nevertheless, although acknowledging the importance of the ATA specification to one skilled in the art in understanding the claims of the '440 patent (Final ID at 107 (citing CPFF 489)), the Final ID ignores its relevance with regard to this disputed limitation, and instead incorrectly focused on an abstract term in the claims to reach its construction. (Final ID at 108 ("Unlike the ATA specification, however, claims 1 and 14 do not actually state that the host computer 'should not' access the command block registers. Rather, said claims state that the host computer is 'precluded' from accessing the command block registers.").)

The Final ID ignored the context of the disputed limitation and, instead, impermissibly construed the term "precluded" in the abstract to reach an incorrect construction that is both contrary to the understanding of those skilled in the art and at odds with the technical requirements governing communication over the IDE bus. As confirmed by the ATA specification, *and both parties' experts*, the role of the BSY bit in managing the communications between a peripheral (such as an optical disk drive) and the host computer over the IDE bus is as an arbitration mechanism to indicate whether the drive currently has access to the registers and that the host computer *should not* be permitted to access them. (Hearing Tr., 294:1-296:8; 2627:13-25.)

¹⁷ See also Hearing Tr., 294:1-18.

Moreover, the Final ID's construction cannot be reconciled with the ATA requirements governing access to the command block registers. The ATA specification mandates that when the BSY bit is set, if the host attempts to access the command block registers, such access should be treated as a read of the contents of the status register. (CX-1294 at 1039DOC00015 ("When BSY=1, a read of any Command Block Register shall return the contents of the Status Register.").) However, under the Final ID's construction (preventing *any* accesses to the command block registers), it would be a technical impossibility to comply with this ATA requirement. Thus, the proper meaning of the disputed phrase, consistent with the understanding of those skilled in the art, and with the requirements of the ATA specification, is that the BSY bit indicates whether the host computer should be permitted to access the command block registers, not that the host computer is prevented from doing so. Accordingly, the Commission should review and reverse the Final ID's construction in favor of that advocated by Complainants, and find that the accused MediaTek optical storage controllers infringe the asserted claims of the '440 patent.

d. The Final ID's Reliance On The '877 Patent Is Misguided And Lacks Supporting Evidence.

To justify its incorrect construction, the Final ID relies on the disclosure of the cited prior art '877 patent.¹⁸ (Final ID at 107.) While reliance on the '877 patent is not unreasonable, the Final ID simply misconstrued the disclosure in that reference.

The '877 patent describes, in part, the operation of the BSY bit in managing access to the ATA command block registers. (*See* CX-11 at ZC2438-ZC2464). The relevant portion of the '877 patent is set forth below:

¹⁸ U.S. Patent No. 5,446,877. (CX-11 at ZC2438-ZC2464.) The '877 patent was originally filed November 13, 1990. Id.

The status register comprises eight indicator bits. Of particular interest to the present invention is the BUSY bit 521 (bit 7 counting from bit 0 at the right). In a typical disk drive operation in the prior art, at the beginning of a command sequence, the BUSY bit 521 is set under the control of a local processor. The BUSY bit 521 remains set until completion of an operation. During the time period when the BUSY bit 521 is set, the host computer is not allowed access to the remaining registers in the task file 500. Further, the host computer may not access any other device coupled with the IDE interface during the time period when one controller coupled with the bus has its BUSY bit 521 set. (CX-11 at ZC2459, col. 8, ll. 17-30).

Complainants' expert cited that passage during the hearing as further evidence that his construction is consistent with what one skilled in the art would understand is the role of the BSY bit in arbitrating access to the command block registers. (Hearing Tr., 422:25-426:9.) Indeed, the '877 patent confirms that those skilled in the art understood that when the BSY bit was set, the host computer *should not* access the task file registers. In other words, the BSY bit indicates when the host computer is and is not permitted to access the task file registers.

Notably, Respondents' expert *never* offered any conflicting evidence concerning the '877 patent.¹⁹

Nevertheless, the Final ID concluded, without any supporting evidence from one skilled in the art or an expert, that the reference supported the opposite construction. (Final ID at 107.) In so doing, the Final ID mistakenly concluded that the '877 patent's language "is not allowed access" and "may not access" is the same as "cannot access." (*Id.*) But that is not what the '877 patent says. The '877 patent never states that the host computer is *prevented* from accessing the command block registers when the BSY bit is set, just that it is not *permitted* to access (*i.e.*, cannot versus should not). That is fully consistent with the teaching of the '440 patent and

¹⁹ Moreover, Respondents never even addressed the '877 patent in their post hearing papers. (See RBr. and RRBr.)

Complainants' construction that the BSY bit indicates when the host computer is permitted to access the command block registers. The record does not support the Final ID's determination, and the reliance on the '877 patent as support for the Final ID's incorrect construction is erroneous.

e. The Construction Adopted In The Final ID Lacks Specification Support And Expressly Excludes The Preferred Embodiment.

Finally, the construction adopted in the Final ID is incorrect because it lacks support from the '440 patent specification and excludes the preferred embodiment of the invention. Respondents' expert conceded at the hearing that his claim construction excludes the patent's preferred embodiment *and* is unsupported by the specification. (Hearing Tr., 2885:15-2890:23.) A construction that excludes the preferred embodiment is *rarely, if ever, correct, and requires highly persuasive evidentiary support*. *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996). Such evidence is wholly absent in this record.

When questioned at the hearing about his construction, Respondents' expert stated *six different times* that his construction excluded the preferred embodiment and was unsupported by the specification:

BY MR. ALLCOCK: And not only that, your claim construction would not read on the preferred embodiment of the '440 patent; is that right?

MR. BUSCAINO: I think it wouldn't read on the preferred embodiment because the patent is silent on what it means to preclude or not preclude. It's not described in the patent. This discussion only occurs in the claims. (Hearing Tr., 2886:2-9).

BY MR. ALLCOCK: In any event, your – there's nothing disclosed in the preferred embodiment that would support your construction; is that right?

MR. BUSCAINO: That's correct. Because there's nothing in the patent that describes how to preclude or not preclude. (Hearing Tr., 2886:18-23).

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BY MR. GOLDMAN: Does that include the controller that's described in the preferred embodiment of the '440 patent?

MR. BUSCAINO: There is nothing disclosed in the preferred embodiment that would tell you or suggest to you how you would make -- make it impossible for the host to read or write the AT -- ATA command block register addresses. (Hearing Tr., 2888:3-10).

BY MR. GOLDMAN: How about making it impossible for the host to read or write the ATA command block registers. Is there anything in the '440 patent description of the preferred embodiment that would tell one skilled in the art how to do that?

MR. BUSCAINO: There's nothing in the '440 patent that would tell one skilled in the art how to make it -- let me -- let me strike that.

Q: Okay.

A: The patent doesn't disclose how to make it impossible for the host computer to access the ATA command block register addresses. And the patent also doesn't disclose how to make it possible for the host computer to prevent access to the ATA command block registers. It -- it doesn't provide any information in the patent, other than in the claims. (Hearing Tr., 2888:11-2889:1).

BY MR. GOLDMAN: So would you agree that your interpretation of this claim language would not cover the preferred embodiment that's described in the '440 patent specification?

MR. BUSCAINO: I'm -- I'm having trouble with the "not cover" part. Like I said, I explained that I -- I believe that there is nothing in the patent that describes how you would prevent the host computer from accessing the registers or the register addresses. There is nothing there. But the claims itself state that. (Hearing Tr., 2889:9-19).

BY MR. GOLDMAN: Would the preferred embodiment of the invention that is described in the '440 patent specification infringe claim 1 of the '440 patent under your interpretation of the claim language for this limitation?

MR. BUSCAINO: I don't think it could infringe because I don't know how a controller can prevent the host computer from preventing access to command block register addresses. So the preferred embodiment would not infringe.

Q: Would the preferred embodiment of the invention that is described in the '440 patent specification infringe claim 14 of the '440 patent under your interpretation of the preclude from accessing language in claim 14?

A: I believe my last answer applies to claim 14 as well. (Hearing, Tr. 2890:7-23).

In light of this clear testimony by Respondents' expert, the Final ID's claim construction cannot be sustained. The Final ID never reconciles its construction with these admissions by Respondents' expert. Thus, the construction is not supported by the specification, and it also excludes the preferred embodiment of the invention without any persuasive evidentiary support. *Vitronics*, 90 F.3d at 1576.

Accordingly, the claim construction advanced by Respondents and the OUII, and ultimately adopted in the Final ID, cannot be sustained. For each of the foregoing reasons, the Commission should review and reverse the Final ID and adopt Complainants' construction that "the BSY bit indicates whether the host computer is permitted to access the command block registers." (Hearing Tr., 290:7-24; 419:21-420:23; 426:11-21.) As the proper claim construction of this term is dispositive of infringement, the Commission should also reverse the Final ID's finding of no infringement of the '440 patent.

3. Construction of the Common Term "Controller" in the '527 and '440 Patents.

The term "controller" is present in each independent claim of the '527 and '440 patents. (See CX-2, claims 1-3; CX-3, claims 1 and 14.) Respondents and the OUII argued that this term should be construed broadly as a device or group of devices to control data communications between a host computer and the optical disk drive electronics. (SBr. at 13-15; RBr. at 24; Final ID at 77.) Complainants, on the other hand, argued that due to the disclosure in the specification, and unambiguous statements in the file history, the proper construction for this term should be qualified to make clear that in the context of the claims, the controller cannot include an

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intervening translation device or translation circuitry. (CBr. at 18-20; Final ID at 78.) The Final ID adopted the construction advocated by Respondents and the OUII and, in so doing, ignored these relevant statements.²⁰

The Final ID premised its incorrect construction on the common usage of the term at the time of the invention. (Final ID at 79.) Specifically, the Final ID focused primarily on whether the term should be restricted to a single device. (*Id.*) However, Complainants were not disputing that the term could encompass a device or a group of devices. (See CBr. at 18.) Instead, Complainants argued that, in light of disclosures in the specification and the file history, any such group of devices could not include an intervening translation device or translation circuitry. (See CBr. at 18-20.)

The Final ID does not address that intrinsic evidence. Instead, based on an incomplete inquiry, the Final ID concluded that “there is nothing in the claim language, the specification, or the prosecution history that suggests the claimed controller must be a single device.” (Final ID at 79.) A complete inquiry would have resulted in the construction advanced by Complainants.

As an initial matter, the claims themselves recite a “controller,” not another device that consists of both a controller and some other device or extraneous circuitry, such as an adapter card or a translation board. (See CX-2, col. 28, ll. 30-33; col. 28, ll. 55-57; col. 29, ll. 10-11.) Indeed, nothing in the claim language supports a construction of a controller that encompasses both a controller and such additional devices. (*Id.*)

Moreover, the patent specification never identifies the controller as constituting a combination of what is commonly understood to be a controller and other devices, let alone a

²⁰ The proper construction for the term “controller” has no bearing on the issue of infringement, but may be relevant to validity issues. Under either party’s construction it is undisputed that this limitation is met in the MediaTek chips. (Hearing Tr., 2679:21-2680:7; 2748:16-2751-16; 2759:11-2760:13.)

combination of a controller and separate translation circuitry. (See CX-2, col. 1, ll. 1 – col. 28, ll.

28.) In fact, the specification *expressly teaches away* from such a combination. For example, the '527 patent states that the purpose of the invention is to “*obviate the need for an additional host adapter [i.e., translation] card and associated electronics.*” (CX-2, col. 2, ll. 41-43.) The '527 patent also states that the invention “*eliminat[es] the need for a host adapter [i.e. translation] card or additional ISA bus interface electronics.*” (CX-2, col. 5, ll. 45-48.)

Importantly, the prosecution history clearly precludes a construction of a “controller” that encompasses both a controller and separate translation circuitry. (Hearing Tr., at 274:16-276:4; CX-10, at ZC001816-ZC001817.) Specifically, in the applicants’ February 28, 2002, Office Action Response, the patent attorney overcame a prior art rejection by arguing that *the claim language could not be met* by the prior art (i.e., the Kikinis patent and the Mitsumi prototype) “*where a controller requires a translator card or other intervening circuitry between the controller and the IDE bus to translate or manipulate command data.*” (CX-10, at ZC001816-ZC001817.) This distinction was argued with regard to the “directly” connect claim language that describes the nature of the connection between the controller and the IDE bus. (*Id.*) However, this distinction is also unequivocally relevant to the correct construction of the term “controller,” as it confirms that in the context of the claims, there is a distinction between the controller and a separate translator card or similar circuitry. Indeed, if the Examiner had considered the “translator card or other intervening circuitry” to be part of the claimed controller, the Examiner might not have withdrawn his previous rejection (insofar as that rejection was based on the direct connection limitation) because the combination of the controller and the translator card may have resulted in a “direct” connection to the IDE/ATA bus.

Accordingly, because the specification and the prosecution history teach away from the construction of “controller” adopted in the Final ID, Complainants request the Commission to

review and clarify that construction and find that the claimed “controller” cannot be a group of devices that include a chip along with an adapter card or other circuitry that translates IDE interface signals and that is physically separate from an existing controller.

B. Infringement.

1. The Accused MediaTek Controllers Literally Infringe Claims 1 And 2 Of The ’527 Patent Under The Appropriate Claim Construction.

As noted above, the proper construction for “error detection and correction circuitry” controls the issue of whether there is infringement of claims 1 and 2 of the ’527 patent. MediaTek’s expert acknowledged that the only limitation of these claims not present in the accused MediaTek controllers is that pertaining to error correction and detection.²¹ (Hearing Tr., 2680:4-7). Importantly, MediaTek’s expert made this concession assuming his claim construction for “storage medium interface” would be adopted, which it was. (Hearing Tr., 2613:13-2614:4; 2614:22-2615:1; 2686:23-2687:17). Accordingly, in light of the concessions by MediaTek’s expert, if the Commission reverses the Final ID’s construction of “error detection and correction circuitry,” it must enter a finding that the accused MediaTek controllers infringe claims 1 and 2 of the ’527 patent in addition to infringing claim 3.

2. The Accused MediaTek Controllers Literally Infringe The Asserted Claims Of The ’440 Patent.

As with the ’527 patent, the proper construction for “precluded” in claims 1 and 14 of the ’440 patent controls the infringement determination. MediaTek’s expert acknowledged that the only limitation of these claims not present in the accused MediaTek controllers is that pertaining

²¹ Mr. Buscaino’s opinion relies on his construction for error detection and correction circuitry. (Hearing Tr., 2615:2-15.)

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to the “precluded” from accessing limitation.²² (Hearing Tr., 2748:16-2751:16; 2759:11-2760:13.) As the Final ID notes,

REDACTED

REDACTED . (See Final ID at 125, citing SPFF320.) Moreover, it is undisputed that (Id., citing CPFF 869.) It is also undisputed that

REDACTED

citing CPFF 872-CPFF 875.)

The Final ID’s finding of non-infringement was premised on an incorrect construction for the disputed claim limitation. (See Final ID at 126

REDACTED

Accordingly, if the Commission reverses the Final ID’s construction of “precluded” from accessing it should enter a finding that the accused MediaTek controller chips infringe the asserted claims of the ’440 patent.

C. The Accused Products.

The list of MediaTek products held to infringe the ’527 patent should specifically identify the MT1189, and to the extent there is any lack of clarity in the Final ID, the Commission should review and correct that. The ALJ, OUII, Respondents, and Complainants all identified the MT1189 among the accused optical storage products. It appears, however, that the MT1189 was

²² Mr. Buscaino’s opinion relies on his construction for the disputed limitation. (Hearing Tr., 2648:14-2651:7.)

inadvertently omitted from a list of “accused MediaTek chips” in one section of the Final ID. (See Final ID at 110.) To remove any possible ambiguity, the Commission should review and clarify that the MT1189 was accused and infringes claim 3 of the ’527 patent, as well as any other claims of the ’527 and ’440 patents that are ultimately found to be infringed upon review.

There is ample evidence that the parties considered the MT1189 to be among the accused products. For example, during the hearing, counsel for Respondents objected to an exhibit that referred to the MT1189. (Hearing Tr., 749:7–9.) Respondents’ counsel withdrew that objection upon being reminded that the MT1189 “is one of the accused chips in this investigation.” (Hearing Tr., 750:5–9, 751:2–4.)

Respondents, Complainants, and OUII all listed the MT1189 as an accused product in their post-hearing briefs and proposed findings of fact. (RBr. at 56; CBr. at 23; CFF522; CFF51; SPFF299.) Further, although Respondents objected to Zoran’s proposed finding CFF51—identifying the MT1189 as an accused product—their rebuttal finding reaffirmed that the MT1189 is among the accused products. (RRCFF51.) Moreover, Respondents stipulated, and the Final ID found that, “MediaTek has imported, sold for importation or sold after importation into the United States the accused MT1189 chip.” (CX-467, at 3; Final ID at 173; FF8.)

Although OUII listed the MT1189 as an accused product in its proposed findings of fact (SFPP299), it did not list the MT1189 as an accused product in its Post-Hearing Brief (SBr. at 55). The inconsistency may have occurred as a result of MediaTek’s interrogatory response, which identifies the MT1189 as one of seven internal designation numbers for the MT1199 product, rather than a distinct product designation. (CX-972C at 7–8.) Consistent with the list from OUII’s Brief, the Final ID, at one point, also fails to explicitly identify the MT1189 as an accused product. (Final ID at 110.) However, there is no separate analysis of the MT1189 anywhere in the Final ID justifying some different finding with respect to that product alone.

Instead, it appears that the omission of the MT1189 from that list was an inadvertent error.

Because all parties are in agreement that the MT1189 was one of the accused products, and because all the accused products were found to infringe claim 3 of the '527 patent for the same reason, the Commission should review and clarify the Final ID to explicitly state that the MT1189 is one of the infringing "accused MediaTek products."

D. The Respondents That Should Be Found In Violation.

The Commission should review and clarify which of the Respondents should actually be found in violation of Section 337. The Final ID states, in its conclusions of law, that "Respondents' accused products infringe the asserted claim 3 of the '527 patent." (Final ID at 187.) Further, the Final ID found that "[e]ach of the Respondents has stipulated that if a MediaTek OSC chip is found to infringe the claims of the '527 and '440 patents, each of Respondents' downstream products in which that chip is incorporated also infringes. (CFF523-528.)" (Final ID at 24.) There is, however, no clear recitation of which Respondents infringe if a finding of violation is limited to only the '527 and '440 patents.

Each Respondent stipulated if "any Accused MediaTek Chip is found to infringe one of the Asserted Patents, its incorporation in a product that is imported, sold for importation, or sold after importation into the United States by one of the Manufacturer/Distributor Respondents would not materially change its structure and/or function, or cause it not to infringe." (CX-466C, at 1; CX-465C, at 1.) Although Complainants accused each Respondent of infringing the collective asserted patents, it did not accuse each Respondent of infringing each patent. Zoran accused MediaTek, Inc., Artronix Technology, Inc., ASUS Computer International, ASUSTek Computer, Inc., EPO Science & Technology, Inc., Lite-On Information Technology Corporation, Micro-Star International Co., Ltd., MSI Computer Corp., TEAC Corporation, TEAC America, Inc., and Ultima Electronics Corporation of infringing the '527 and '440 patents. (See CFF24-

50 (identifying each respondent and the patent(s) it is accused of infringing.) The other Respondents were only accused of infringing the '736 patent, and since Complainants are not seeking review of the Final ID's conclusions of non-infringement on that patent, those other Respondents will not be found in violation of Section 337 regardless of the outcome of this petition.

Accordingly, the Commission should clarify that Respondents MediaTek, Inc., Artronix Technology, Inc., ASUS Computer International, ASUSTek Computer, Inc., EPO Science & Technology, Inc., Lite-On Information Technology Corporation, Micro-Star International Co., Ltd., MSI Computer Corp., TEAC Corporation, TEAC America, Inc., and Ultima Electronics Corporation were the Respondents found to have violated Section 337 based on their infringement of claim 3 of the '527 patent. If the Commission were to review and reverse the Final ID based on this petition, those companies would still be the only respondents that should be found in violation of Section 337.

IV. CONCLUSION

For the reasons stated above, the Commission should review, and ultimately reverse, the following portions of the Final ID: (1) the claim construction of the "data error detection and correction circuitry" claim element in claims 1 and 2 of the '527 patent and the associated non-infringement findings; (2) the claim construction of the "precluded" from accessing claim element of the asserted claims of the '440 patent and the associated non-infringement findings; and (3) the claim construction of the common term "controller" in both the '527 and '440 patents. The Commission should also clarify that the MT1189 chip was among the accused products found to have infringed claim 3 of the '527 patent, and specify the particular respondents that sold or imported infringing optical storage devices and that should be found in violation of Section 337.

Dated: May 27, 2005

Respectfully submitted,

William G. Goldman

John Allcock
Mark Fowler
Gerald T. Sekimura
William G. Goldman
Michael G. Schwartz
Thomas A. Burg
DLA PIPER RUDNICK
GRAY CARY US LLP
2000 University Avenue
East Palo Alto, California 94303
Tel: 650-833-2000
Fax: 650-833-2001

Smith R. Brittingham IV
Paul C. Goulet
Elizabeth A. Niermeyer
FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER LLP
901 New York Avenue, N.W.
Washington, DC 20001
Tel: 202-408-4000
Fax: 202-408-4400

Attorneys for Complainants
Zoran Corporation and Oak Technology, Inc.

CERTIFICATE OF SERVICE

I, Melanie Wolfe, hereby certify that on June 6, 2005, a copy of the foregoing document was filed and served on the following as indicated:

The Honorable Marilyn R. Abbott, Secretary
U.S. International Trade Commission
500 E Street, S.W., Room 112
Washington, D.C. 20436
(VIA HAND DELIVERY- Original and 12 Copies)

Karin J. Norton
Office of Unfair Import Investigations
U.S. International Trade Commission
500 E Street, S.W., Room 401-A
Washington, D.C. 20436
(VIA HAND DELIVERY/ ELECTRONIC MAIL)

The Honorable Paul J. Luckern
Administrative Law Judge
U.S. International Trade Commission
500 E Street, S.W., Room 317-A
Washington, D.C. 20436
(VIA HAND DELIVERY – 2 Copies)

For All Respondents:

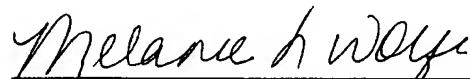
Michael A. Ladra, Esq.
James C. Otteson, Esq.
Wilson Sonsini Goodrich & Rosati
650 Page Mill Road
Palo Alto, CA 94304-1050
(VIA FEDERAL EXPRESS/ELECTRONIC EMAIL)

For Respondent MediaTek, Inc.:

William H. Wright, Esq.
Hogan & Hartson LLP
Biltmore Tower
500 South Grand Avenue, Suite 1900
Los Angeles, California 90071
(VIA ELECTRONIC MAIL)

For Respondent TEAC Corp. & TEAC Am., Inc.:

Mark S. Zolno, Esq.
Katten Muchin Zavis Rosenman
525 West Monroe Street, Suite 1600
Chicago, IL 60661-3693
(VIA ELECTRONIC MAIL)



FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.
901 New York Avenue, N.W.
Washington, DC 20001
(202) 408-4000